

DP-300809

IN THE SPECIFICATION

Please amend the specification as follows:

[0016] The CO-selective catalyst alleviates the current problems faced when catalysts comprising a precious metal are employed for CO oxidation, as the present CO-selective catalyst, comprising a modifying agent, is selective to removal of CO in preference to H<sub>2</sub> and hydrocarbon (HC) (e.g., propylene (C<sub>3</sub>H<sub>6</sub>), methane (CH<sub>4</sub>), and the like) removal. Furthermore, the CO-selective catalyst is capable of operating over a greater temperature range than catalysts without a modifying agent. Therefore, in a reforming derived H<sub>2</sub> rich feed, the catalyst of the present disclosure results in the removal of CO with a low waste of hydrogen (e.g., less than about 3 mole% oxidation of H<sub>2</sub>) over wide temperature ranges (e.g., over temperatures ranges greater than about 200°C), resulting in a simple and efficient catalytic system.

[0033] However, as shown in Figure 2, the Pb-containing catalysts (diamonds and asterisks) show upwards of up to about 100% inhibition of H<sub>2</sub> oxidation in comparison to the non-Pb containing catalyst (triangles) which shows H<sub>2</sub> oxidation rates of about 1.5 to about 3.0 micromoles/second at temperatures of about 150 to about 615°C. As shown in Figure 3, the Pb-containing catalysts (diamonds, asterisks, and triangles) show upwards of up to about 100% inhibition of C<sub>3</sub>H<sub>6</sub> oxidation rates in comparison to the non-Pb containing catalyst (circles) which shows C<sub>3</sub>H<sub>6</sub> oxidation rates of about 0.03 to about 0.115 micromoles/second at temperatures of about 220 to about 615°C.

[0054] Figure 9 is useful in showing that even over the temperatures of about 180 to about 400°C, no measurable amount of CH<sub>4</sub> is formed by the catalyst; whereas, in the conventional catalyst made without the addition of the modifying agent, such as Pb, CH<sub>4</sub> is produced at concentrations ranging from about 0.017 mole% to about 0.057 mole% at temperatures ranging from about 250 to about 300°C, representing an undesirable catalysis of a unwanted side reaction. The formation of CH<sub>4</sub> is at the expense of consuming H<sub>2</sub>, therefore lowering the efficiency of H<sub>2</sub> in the fuel processing system.